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Amdt. dated July xx, 2008
Reply to Office action of June 30, 2008

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended): A method of generating a three-dimensional breast thickness object for a digital mammogram of a breast, the method comprising:

(a) generating a phantom thickness object for transforming into the breast thickness object, the phantom thickness object being generated in a three-dimensional modeling means and being substantially breast-shaped, and being generated by providing an x-ray of a physical phantom;

(b) determining a set of dimensions for the breast; and

(c) transforming the phantom thickness object to conform to the set of dimensions to provide the three-dimensional breast thickness object in the three-dimensional modeling means.

2. (Original): The method as defined in claim 1 wherein the set of dimensions comprises a thickness readout for the breast and a size of the digital mammogram and wherein step (c) comprises

normalizing a set of thickness values of the phantom thickness object based on the thickness readout for the breast; and,

rescaling the phantom thickness object to the size of the digital mammogram.

3. (Original): The method as defined in claim 2 further comprising

determining a set of phantom landmarks at the edge of the phantom thickness object;

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determining a set of breast landmarks at the edge of the digital mammogram; and

warping the phantom thickness object to map the set of phantom landmarks onto the set of breast landmarks.

4. (Original): The method as defined in claim 3 further comprising

determining a second set of phantom landmarks on the phantom thickness object;

estimating a breast density at a second set of points in the digital mammogram to determine a breast local thickness at the second set of point and a second set of breast landmarks corresponding to the second set of points; and

warping the phantom thickness object to map the second set of phantom landmarks onto to the second set of breast landmarks.

5. (Currently amended):   A computer program product for use on a computer system for analyzing digital mammograms, the computer program product comprising

(a) a computer-readable recording medium;

(b) phantom thickness object generation means recorded on the computer-readable recording medium for instructing the computer system to generate the phantom thickness object, wherein the phantom thickness object is generated by providing an x-ray mammogram of a physical phantom breast;

(c) data entry generation means recorded on the computer-readable recording medium for instructing the computer system to upload a set of dimensions for the breast; and,

(d) transformation generation means recorded on the computer-readable recording medium for instructing the computer system to transform the phantom thickness object to conform to the set of dimensions for the breast to provide the three-dimensional breast thickness object.

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6. (Original): A computer program product as defined in claim 5 wherein the set of dimensions comprises a thickness readout for the breast and a size of the digital mammogram, and wherein the transformation generation means comprises

normalizing means for instructing the computer system to normalize a set of thickness values of the phantom thickness object based on the thickness readout of the breast;

rescaling means for instructing the computer system to rescale the phantom thickness object to the size of the digital mammogram.

7. (Currently Amended):   The computer program product as defined in claim 6 further comprising

first phantom landmark generation means recorded on the <u>computer readable</u> recording medium for instructing the computer system to determine a set of phantom landmarks at the edge of the phantom thickness object; and

first breast landmark generation means recorded on the recording medium for instructing the computer system to determine a set of breast landmarks at the edge of the digital mammogram;
wherein the transformation generation means is operable to instruct the computer system to warp the phantom thickness object to map the set of phantom landmarks onto the set of breast landmarks.

8. (Currently Amended) The computer program product as defined in claim 7 further comprising

second phantom landmark generation means recorded on the <u>computer-readable</u> recording medium for instructing the computer system to determine a second set of phantom landmarks at the edge of the phantom thickness object; and

second breast landmark generation means recorded on the <u>computer-readable</u> recording medium for instructing the computer system to estimate a breast density at a second set of points in the digital mammogram to determine a breast local

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thickness at the second set of point<u>s</u> and a second set of breast landmarks corresponding to the second set of points;

wherein the transformation generation means is operable to instruct the computer system to warp the phantom thickness object to map the second set of phantom landmarks onto the second set of breast landmarks.

9. (Currently Amended)   A computer system for analyzing digital mammograms, the computer system comprising

        (a) phantom thickness object generation means for generating the phantom thickness object <u>based an x-ray mammogram of a physical phantom</u>;

        (b) data entry means for receiving a set of dimensions for a breast; and,

        (c) transformation means for transforming the phantom thickness object to conform to the set of dimensions for the breast to provide the three-dimensional breast thickness object.

10. (Original) The computer system as defined in claim 9 wherein the set of dimensions comprises a thickness readout for the breast and a size of the digital mammogram, and wherein the transformation means comprises

        normalizing means for normalizing a set of thickness values of the phantom thickness object based on the thickness readout of the breast; and,

        rescaling means for rescaling the phantom thickness object to the size of the digital mammogram.

11. (Original) The computer system as defined in claim 10 further comprising

        first phantom landmark determining means for determining a set of phantom landmarks at the edge of the phantom thickness object; and

        first breast landmark determining means for determining a set of breast landmarks at the edge of the digital mammogram;

wherein the transformation means is operable to warp the phantom thickness object to map the set of phantom landmarks onto the set of breast landmarks.

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12.(Currently Amended) The computer system as defined in claim 11 further comprising

second phantom landmark determining means for determining a second set of phantom landmarks at the edge of the phantom thickness object; and

second breast landmark generation determining means for estimating a breast density at a second set of points in the digital mammogram to determine a breast local thickness at the second set of point<u>s</u> and a second set of breast landmarks corresponding to the set of points;

wherein the transformation means is operable to warp the phantom thickness object to map the second set of phantom landmarks onto the set of breast landmarks.